



FROM THE DESK OF THE  
JBDA TEST DIRECTOR  
COLONEL JAMES G. DIEHL,  
US ARMY

## HOW-GOES-IT

Upon my arrival in late August of this year, I was impressed by how much progress the original Joint Battle Damage Assessment (JBDA) Joint Test and Evaluation (JT&E) team had made since being chartered in July 2000. We are still located in the JT&E facility in Suffolk, Virginia, but a move to a different location in the local area is anticipated in early 2002.

From hosting the worldwide BDA symposium to gathering data during a real-world contingency, this has been a busy year. Although still in the process of ramping up, JBDA has observed training at the Joint Targeting School (JFCOM) and the 480th Intelligence Group (ACC). They also observed and documented BDA processes during exercises Internal Look (USCENTCOM), Union Flash (USEUCOM), and Ulchi Focus Lens (USFK).

In addition to documenting warfighter processes, JBDA itself was observed performing its mission during the USFK trip by Mr. Brian Simmons, Deputy to the Commander, US Army Developmental Test Command, and Mr. Richard Sayre, Institute for Defense Analyses, Operational Evaluation Division. Also during this exercise, USFK implemented a BDA web page jointly developed by JBDA and the JFCOM Precision Engagement Division.

Further, the tragic events of September 11th have caused JBDA to implement its contingency test plan. The JT&E is



## GROUND TRUTH

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***WHAT IS BDA?*** BDA (battle damage assessment) is the timely and accurate estimate of damage resulting from the application of military force, either lethal or non-lethal, against a predetermined objective. BDA can be applied to the employment of all types of weapons systems throughout the range of military operations.

gathering real-world operational data at the NMJIC and USCENTCOM's BDA cell. JBDA will analyze the data collected from these exercises and contingency operations to form a baseline of the BDA process as the first step in developing enhancements. Potential enhancements include redesigning BDA reporting and assessment requirements into a common electronic format, developing and improving TTPs and personnel management and training. Another enhancement is a collection of BDA training CD ROMs focused on augmentees to joint task force BDA cells. According to the initial plan, these training CDs will include the BDA process for bunkers (prototype complete), command architectures, integrated air defense systems, ground maneuver forces, and telecommunication systems.

JBDA is also currently completing the program test plan due at the OSD on 1 December 2001, and will continue to collect and analyze test data. Further, JBDA will attend the Ulchi Focus Lens 02 (UFL 02) initial planning conference in late November to prepare for next year's data collection effort and host the first General Officer Steering Committee proposed for mid-January 2002.

More information about JBDA is available at [www.jbda.jte.osd.mil](http://www.jbda.jte.osd.mil) (or SIPRNET [www.jbda.jte.osd.smil.mil](http://www.jbda.jte.osd.smil.mil)).

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## THE MISSION OF JBDA

JBDA is chartered to employ multi-Service and other Department of Defense agency support, personnel, and equipment to investigate, evaluate, and improve BDA for the joint force commander to facilitate operational decision-making. JBDA will accomplish this mission by:

- Identifying, testing, and assessing current BDA processes and procedures, and recommending and evaluating enhancements
- Characterizing current BDA training and manpower authorizations for unified command, Service, and agency BDA personnel, and recommending and evaluating training improvements
- Defining system and architecture interoperability, and nominating and testing solutions (enhancements)

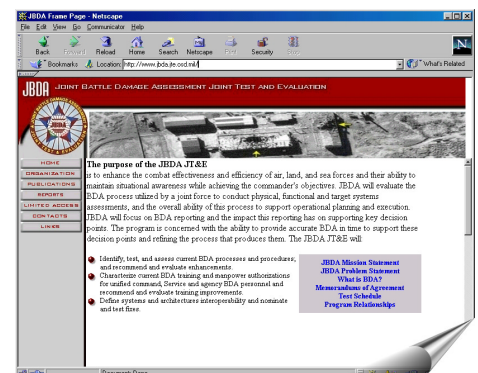
## THE JBDA PROGRAM TEST PLAN

The JBDA JT&E program test plan (PTP) is progressing on schedule and is currently in pre-coordination draft form. The PTP was recently released to JBDA's trusted agents for review in preparation for official submission to the DD, DT&E and DOT&E, on 1 December 2001. Once approved by the OSD, the PTP will serve as the roadmap to focus and direct the conduct of the JT&E.

The PTP drafted documents include baseline test procedures for establishing current BDA processes as executed by joint force commanders and taught at Service schools, test procedures for evaluating the utility of implemented enhancements, and the plan for producing the final report and deliverables. Test venues JBDA plans to continue to observe during the JT&E include Internal Look and Intrepid Flow (USCENTCOM), Union Flash (USEUCOM), and Ulchi Focus Lens (USFK). Currently, JBDA data collectors are at USCENTCOM and in the NMJIC observing BDA in support of operation ENDURING FREEDOM.

JBDA's broad base of observation will facilitate not only the definition

of the BDA process as it exists across the different commands, but the utilization of lessons learned from each in the development of enhancements and legacy products that will benefit the entire BDA community. Primary among potential enhancements being considered at this time are TTPs for mobile target BDA and the attrition of fielded ground forces order of battle. Combat effectiveness models; improved C4I TTPs concerning collaborative tools and collaboration, agency responsibilities, reporting, and linked web formats; and tools to assist with training and personnel management of BDA analysts are also under consideration as potential enhancements.

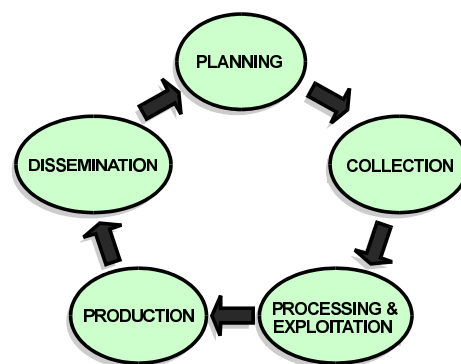


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## SUPPORTING THE WARFIGHTER

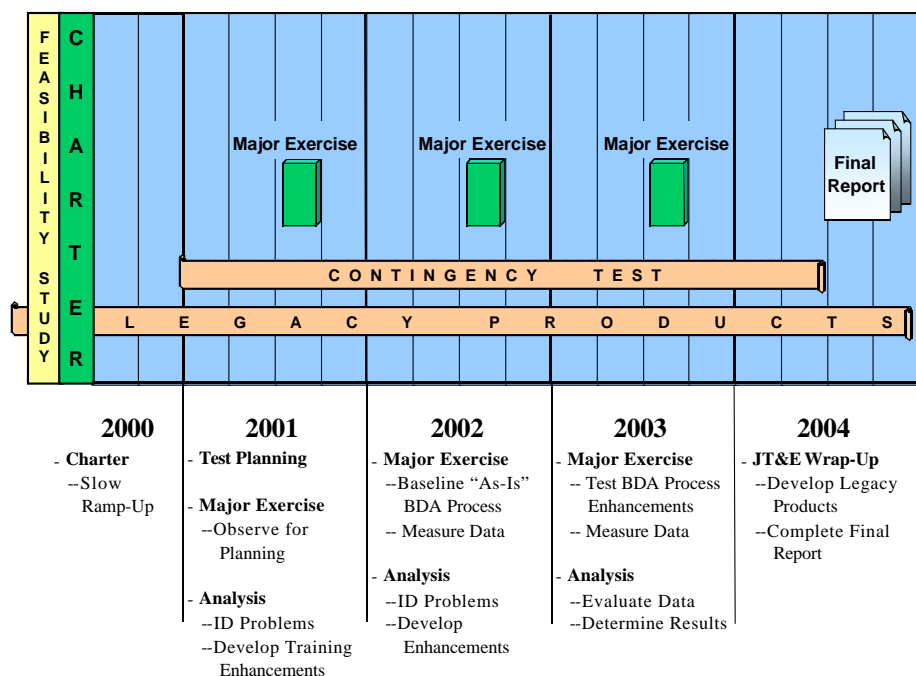
In support of operation ENDURING FREEDOM, JBDA personnel are currently at USCENTCOM and the Pentagon to observe operations, collect data, and research ways to improve BDA in the near term. To directly support America's warfighters during the conduct of combat operations is an opportunity that few JT&Es ever get. This opportunity did not happen by coincidence, however. Based upon guidance from RADM Jacoby, Joint Staff/J2, JBDA began researching the feasibility and requirements of observing real-world operations shortly after being chartered in August 2000. As a result, a generic but comprehensive deployment and data collection plan that could be rapidly tailored to support any geographic contingency was constructed. Following the September 11th terrorist attacks, this tailoring process was immediately initiated. JBDA also deployed operational

and instrumentation experts to USCENTCOM to gain approval for access and to determine the scope of JBDA operations. This prior coordination allowed JBDA personnel to be on site at USCENTCOM and national intelligence agencies observing and collecting data on BDA operations within three days of the first bombs being dropped. Within one week of the initiation of combat operations, JBDA was receiving data at the Suffolk headquarters where analysts began to determine the structure and format of "trials" (comprehensive examples of BDA cycle execution) and reconstruct them. Since the initiation of data collection, JBDA has maintained coverage at USCENTCOM and national intelligence agencies, and conducted limited observation of federated operations at other unified commands. Observation will continue until approximately the 35-day mark when the focus will shift to detailed analysis and validation of the baseline BDA process.



**BDA Cycle**

Moving forward, JBDA has coordinated a BDA working group to discuss potential aids to the warfighter and enhancements to the BDA process. Attendees include subject matter experts from the Joint Staff, USCENTCOM, and other unified commands, as well as the Defense Intelligence Agency, Joint Targeting Toolbox, BDA Advanced Concept Test and Development, and the Theater Precision Strike Organization. Through this working group, JBDA plans to establish a refined focus on which enhancements can most positively impact BDA operations and subsequently ensure the coordination of all efforts going forward from the contributing agencies. The working group findings will further focus the detailed analysis of baseline data and ultimately guide the development of enhancements. A Quick Look Report containing initial findings and a recommended enhancement plan will be presented to USCENTCOM in mid-January 2002. This report will be followed by a detailed report of all operation ENDURING FREEDOM findings and recommendations in mid-March.



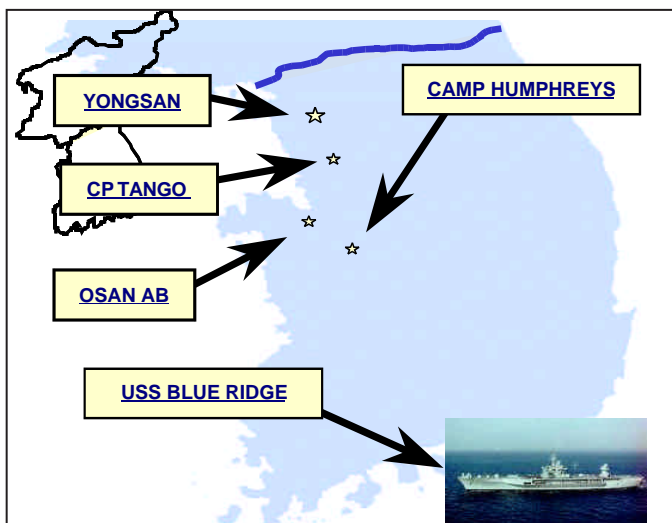
**Test Schedule**



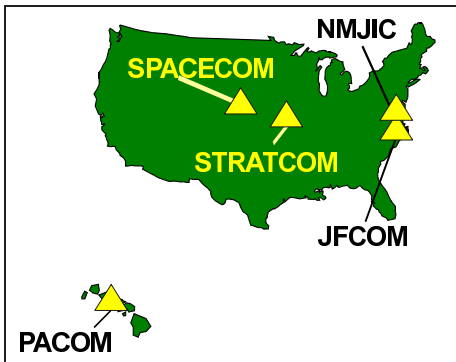
## ULCHI FOCUS LENS 01

In August 2001, a task organized team of 10 military and contractor personnel from JBDA observed exercise UFL 01 in the Republic of Korea. JBDA's mission for UFL 01 was to complete and validate the UFL test plan in preparation for the baseline test to be conducted at UFL 02. To accomplish this mission, JBDA entered the exercise with three primary goals:

1. Translate the "as perceived" USFK IDEF 0 model to the "as is" model.
2. Identify and document the specific processes, systems, and simulation elements required for completion of the IDRL and DMAP.
3. Complete and validate the UFL data collection plan.



JBDA's concept of operations placed observers at exercise locations in theater at Osan Air Base, Camp Humphreys, CP Tango, and Yongsan, as well as aboard USS BLUE RIDGE. Additionally, personnel were dispatched to observe federated BDA outside of Korea at PACOM, STRATCOM, SPACECOM, JFCOM, and the NMJIC.



Data obtained from observations by JBDA personnel and from the cooperation and assistance of USFK personnel satisfied all information requirements. As a direct result, JBDA has finalized the USFK IDEF 0 "as is" model. The data collection plan has been updated to include all consequent changes, and the IDRL

and DMAP are in the final stages of drafting. Thanks to the cooperation and support of USFK personnel and the federated partners, UFL 01 was a complete success and JBDA remains on track.

### JBDA AND J2T HOST BDA SYMPOSIUM

The JBDA JT&E and Joint Staff/J2T co-hosted the inaugural BDA symposium on 27 and 28 June 2001 at the JT&E facility in Suffolk, Virginia. The keynote speaker was Brigadier General Paul J. Lebras, Vice Director for Intelligence, Joint Staff/J2.

The symposium was conducted to provide a forum for BDA professionals to discuss current issues, concepts, and initiatives, as well as future issues and possible solutions. Topics included training, manning, reports, mobile target BDA, intelligence fusion, interoperability, and BDA decision points. Further, the BDA symposium encouraged cross-command information exchange and identified improvements.

Attendees of the symposium came from all over the world. In addition to the briefings and presentations given by JBDA and J2T, many others directly involved in BDA participated. These included USCENTCOM, SOUTHCOM, PACOM, STRATCOM, USFK, Joint Forces Intelligence Command, National Reconnaissance Office, Defense Threat Reduction Agency, BDA Advanced Concept Technology Demonstration/Joint Targeting Toolbox, Naval Air Strike Warfare Center, and Korea's Combined Analysis Control Center.

Judging by the success, JBDA anticipates that the BDA symposium will be an annual event, occurring in the third quarter of each fiscal year. For more information, the 2001 BDA symposium minutes are available at [www.jbda.jte.osd.mil](http://www.jbda.jte.osd.mil), and the briefings are available over the SIPRNET at [www.jbda.jte.osd.smil.mil](http://www.jbda.jte.osd.smil.mil).

## LEGACY PRODUCTS

Legacy products provide a basis by which the conclusions and recommendations of the JT&E can be implemented. Potential users of JBDA legacy products include the joint staff, combatant commands, the Services, and other JT&E efforts.

*Documentation of Operational Concepts and Tactics, Techniques, and Procedures.* Documentation of the BDA process will provide the basis for determining what TTPs currently exist, how the process works, and what is required. JBDA will prepare a compendium of data that supports JT&E findings and outcomes concerning the operational concepts and TTPs for both fixed and mobile target BDA, as well as a combat effectiveness model that fulfills the JFC's requirements. The documentation will address problem areas identified during the JT&E and recommend changes to enhance combat effectiveness. Users will be the joint combatant command, Service staffs, and the commanders and staffs of operational units. This data may also serve as a benchmark baseline of targeting transactions to support future improvement efforts. Potential products and enhancements include the TTP for maneuver force and mobile target BDA, TTP for BDA collaboration, and MASINT training and CONOPS for non-MASINT personnel.

### *Battle Damage Assessment*

*Doctrine.* During the JT&E, the test team will recommend changes for specific joint, multi-Service, and Service publications that should be revised based on JBDA findings or provide requirements for a completely new publication. The JT&E team will prepare recommended changes and provide them to the

joint staff, Services, and agencies as appropriate. Publications that are potential beneficiaries of JBDA findings include Joint Publication (JP) 3-60, *Doctrine for Joint Targeting*; JP 2-01.1, *Joint Tactics, Techniques, and Procedures for Intelligence Support to Targeting*; DIA Handbooks; Air Force Instruction 14-207, *Air Force Targeting*; and Field Manual 34-3, *Intelligence Analysis*. JBDA will also develop new and revised joint terminology definitions for incorporation into Joint Publication 1-02, *Department of Defense Dictionary of Military and Associated Terms*. These definitions will improve the joint lexicon by clarifying the current terminology and defining new terms to better describe a JFC's responsibilities for BDA.

### *Battle Damage Assessment*

*Training.* The JT&E team will identify and document potential enhancements to BDA training. The team's findings and recommendations will be documented and provided to J2-T for the combatant commands, the Services, and other OSD and joint organizations for inclusion in Universal Joint Task List CJCSM 3500.04. Curriculum enhancements will be recommended to DIA joint and Service schools. These recommendations can also be incorporated into joint and Service-hosted battle manager exercises to train the war-fighting staff on multi-source collection management. Some potential products and enhancements include developing a tracking mechanism for BDA experience and training; improving training guidelines, training materials, and exercise support for BDA all-source analysts and imagery analysts; and recommending and developing executive level training for potential JFCs.

*Enhancements to Battle Damage Assessment Systems.* JBDA results will be the basis for providing recommendations to J2-T, combatant commands, and the Services for developing or modifying systems to enhance BDA. JBDA will also investigate the use of COTS/GOTS systems (primarily interactive software programs with imagery) to improve analyst training. Coupling such tools with a tailored intelligence workstation program can expand the training to simulate a JTF environment and include collection management training. The test team will identify problems in areas such as the interoperability of communications and data systems and the commonality and effectiveness of tactical situation displays. The test team will prepare inputs that document problems and the recommendations to correct them. Potential products and enhancements include the following:

- Linked web databases (auto updating with standardized formats) directly supporting targeting and BDA
- Introduction of interoperability (interconnectivity) efforts currently in development for existing equipment to permit communications between the BCD and JAOC, and among the ARFOR tactical operations centers, the MARFOR combat operations centers, and the AFFOR direct air support centers
- BDA cell composition

In addition to the special identifiers cited under BDA training, another potential product and enhancement is the establishment of permanent, special purpose reserve unit(s).

## JBDA SENIOR MENTOR SEMINAR SERIES

The 25th of September marked the first in JBDA's Senior Mentor Seminar Series. These events are occasionally scheduled seminars with senior retired members of the defense community. They are designed as opportunities for the JBDA team to meet with former operational commanders to discuss different aspects of the JBDA process.

Our first event was with a senior USAF (Retired) Joint Forces Air Component Commander. We met in the JBDA spaces for an all-day round table with most of the members of the JBDA team. Our new Test Director, Colonel Jim Diehl, facilitated the event.

After an initial program overview by Colonel Diehl and Mr. Jeff McNeil, the senior mentor provided a whiteboard briefing on the prosecution of an air war. The group then entered into a lengthy discussion of the BDA process and products. To ensure a rich discussion, the JBDA team had prepared a series of questions beforehand. The senior mentor's candid comments on command relationships and on national political and military objectives, as well as his views on centers of gravity, highlighted this portion of the seminar.

The senior mentor offered the following observations based on his perspective as the "chief operations officer" of an air operation:

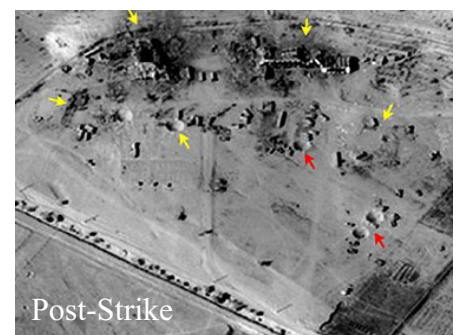
- You must know and understand the political and military objectives in order to select the right targets. This is an absolute requirement if you expect to

ultimately achieve those objectives.

- Merely bombing targets to demonstrate "national resolve" may destroy targets, but likely will not achieve the desired political and military objectives.
- We need to be able to predict the future impact of target destruction (that is, describe the long-term effect). For instance, BDA must go beyond the knowledge of target destruction or non-destruction. We MUST understand the impact that target destruction has at all levels of war. For example, if we destroy a SAM, that impacts the IADS, which impacts the ability of the government to defend itself and its citizens, which MAY bring the leadership closer to accepting our terms for conflict termination.
- The "influence net," also known as "cronies model," delivered by the JFCOM's Joint Warfare Analysis Center was quite useful, but would have been much more so if delivered earlier in the war.
- The BDA process, even if perfected to the nth degree, will not win the war if we do not have the right center of gravity identified.
- There are two gaps slowing down the BDA process - the sensor gap (or the platforms needed to gather the data) and the process gap (or the length of time it takes to get the required information). That data must be delivered quicker to those that need it to proceed with planning subsequent operations. Our ISR suites are truly high-demand, low-density assets. Nevertheless, we need to plan and apportion them in smart ways that leverage their capabilities

so utilization is as high as possible. They must be positioned where needed most to provide the required post-strike feedback.

In closing, the senior mentor encouraged the group to pass along any nuggets discovered during mini-tests or baseline testing to the warfighters early rather than waiting until the end of the test. If of real value to a CINC, they will be used right away. From the JBDA team's point of view, the day was judged a success. The free flow of information and ideas exchanged with a senior mentor was invaluable to the JBDA team in validating the plan for UFL in 2002. As the BDA team travels down the path to process improvement, seminars like this one should prove indispensable as we confirm lessons learned or discuss hypotheses for future improvements.





## WHO'S WHO



**Colonel James G. Diehl**  
US Army  
Joint Test Director  
JBDA JT&E

Colonel James G. Diehl is currently serving as the Director of the OSD JBDA JT&E. He is a 1976 West Point graduate (commissioned in armor). He also graduated from the Command and General Staff College and the School of Advanced Military Studies at Fort Leavenworth, Kansas

and from the US Army War College Fellowship Program at Queen's University in Kingston, Ontario. Colonel Diehl served in a series of troop assignments in Germany with the 1st Armored Division; at Fort Stewart, Georgia with the 24th Infantry Division; and at Fort Lewis, Washington with the 2nd Infantry Division. In addition, Colonel Diehl served a tour as an instructor in the Armor School at Fort Knox, Kentucky; a tour on the staff of the Department of Defense; and a tour on the staff of the US Army's Training and Doctrine Command at Fort Monroe, Virginia. His joint experience includes a tour as the Chief of the Joint Interoperability Training Division, J7/Joint Warfighting Center, US Joint Forces Command, in Suffolk, Virginia.

**Major Scot E. Newport**  
Chief, Test Planning and Execution  
Division

Major Scot E. Newport is a graduate of the Infantry Officer's Basic Course, the Military Intelligence Advanced Course, and the Command and General Staff College. He was commissioned as an Infantry Officer and subsequently



transferred to Military Intelligence. He served as a BN S-2 with the 2/7 Infantry, 24th Infantry Division, during operations DESERT SHIELD and DESERT STORM. He also

served in Europe with US Army, Europe, and the 7th Army, and he participated in operation ALLIED FORCE. As an instructor, Major Newport assisted in standing up the Joint Targeting School at the Dam Neck Fleet Combat Training Center, Atlantic, in Virginia Beach, Virginia.

**Major Robert Wood**  
Data Management  
Branch Chief

Major Robert Wood joins JBDA after serving as a Senior Test Analyst with Joint Warfighters. Having previously served as an Operations Research Analyst in

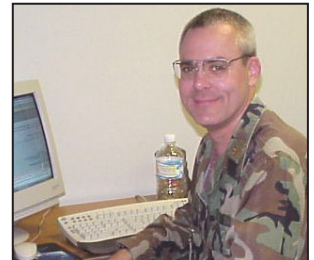


TRADOC, DCST, he brings to the program a wealth of experience in the analysis of training and educational concepts and policies. He served as the Company Commander of Bravo Company, 1-37th Armor, 1st Armored Division, in operations DESERT SHIELD and DESERT STORM. He holds a Bachelor of Arts in History and a Master of Public Administration in Personnel Management, and he is currently completing a PhD in Educational Policy Planning and Leadership from the College of William and Mary.

**Major Tim Boylan**  
Chief, Legacy Products and  
Reports Division

Bringing a wealth of experience as a Field Artillery Officer to the JBDA Program.

Major Boylan holds a Bachelor of Arts in History



from Virginia Military Institute and is a graduate of the Command and General Staff College, the Combined Arms Staff and Service School, and the Field Artillery Officer Basic and Advanced Courses. Commissioned in the Army in 1983, his operational

experience includes tours as a Platoon Leader, Battery Executive Officer, Battery Commander, Battalion and Brigade Fire Support Officer, Test Officer, and Divarty Operations Staff Officer. Most recently, Major Boylan served as the Operations Officer for the 3rd Battlefield Coordination Detachment at Osan Air Base, Korea.

**Joint Battle Damage Assessment** **GROUND TRUTH**

Joint Battle Damage Assessment

Joint Test and Evaluation

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